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(54) **BEAM POSITION CONTROLLER**

(57) Abstract:

PURPOSE: To correct the position of a beam without changing its direction by providing parallel plane plates transmissive to the beam in this approximately parallel beam so that they can be rotated around axes perpendicular to the beam.

CONSTITUTION: Two parallel plane plates 2-a and 2-b are arranged in the laser beam from a laser light source 3 so that respective revolving shafts 20 and 21 are orthogonal to each other (in twisting positions), and the beam is displaced upward, downward, and perpendicularly on the surface of paper. Antireflection films for the laser wavelength are provided on both faces of two parallel plane plates. Revolving shafts 20 and 21 are arranged perpendicularly to the beam; and in a projection type semiconductor exposure device 4, the beam from the laser light source 3 is made incident on a fly-eye lens 9 and is turned downward by a mirror 10 and is uniformly projected to a reticle 12, where a negative pattern is drawn, by a condenser lens 11, and the image is transferred to a wafer 14 mounted on a stage 15 by a projection optical system 13. Angles of inclination of parallel plane plates are calculated by a computer 6 and

parallel plane plates are rotated by actuators to correct the positional deviation of the beam.

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